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BARON, HENRY				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/766,695

Applicant(s)

NARVAEZ, PAOLO

Examiner

HENRY BARON

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/12/2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 1-12, 20-29 and 42-45 is/are rejected.
7) ☐ Claim(s) 13-19 and 30-41 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Detailed Action

Response to Arguments/Remarks

1. Claims 1 – 45 are pending in the application. Claims 1 - 12, 20 – 29, and 42 - 45 are rejected. Claims 13 – 19, and 30 – 41 are objected to. Claim 25 has been amended to correct informality.
2. Examiner notes that the drawing designating multiple elements with the reference character 520 has been replaced. The Examiner withdraws the drawing objection.
3. Applicant's arguments filed 12/12/2007 have been fully considered but they are not persuasive.
4. Applicant traverses the 103 rejection of claims 1 – 12, 20 – 29 and 42 – 45 arguing that no combination of the references teaches all elements of the claims and because there would have been no motivation to combine the references at the time of invention.
5. In particular, Applicant argues, Buskirk is silent regarding combining a flow ID and a priority ID to create a queue ID and deficient with regard to teachings related to receiving data at a plurality of ports and extracting a plurality of tags and a logical port identifier from a first portion of a data packet.
6. Buskirk does not teach a method for classifying that requires receiving a data packet at one of a plurality of ports coupled to a heterogeneous network. Buskirk includes no teaching or suggestion of a plurality of ports coupled to a heterogeneous network.
7. The Examiner argues that Buskirk teaches a data classifier and method of classifying data in a data classifier deployed in a network device with ports coupled to a heterogeneous communication network in 4: [0037] "... the present invention may be used in connection with multi-protocol flow classifying/parsing systems.." and 2 [0015+] read multiple packet flow and multiple protocols i.e. heterogeneous communication network; Figure 2 elements 204, 206 and 208 show ports coupled to a heterogeneous communication network.
8. With regards to combining a flow ID and a priority ID to create a queue ID, Buskirk teaches the network associated with the data packet (6:[0060] flow is identified upon arrival of frame header); and

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priority ID (6:[0061] read priority fields in header to classify flows). As far as the Examiner can discern, the Applicant does not dispute these teachings. The Examiner never argued that Buskirk taught creating a queue ID, but cited Mann's teaching of a packet bundle descriptor as teaching a queue ID and presented a motivation to combine the two teachings.

9. Applicant argues that Buskirk, para. 49 is concerned with generating search keys and that the search is not limited to any specific portion of a data packet ("generating search keys from data anywhere within the frame"). Further Applicant argues that nothing in this passage teaches or suggests extracting a logical port identifier from a first portion of a data packet.

10. The Examiner argues that the paragraph cites, as Applicant acknowledges, that "... results are used with an extractor that builds search keys which can be applied against a CAM (or indexed directly to a memory) to generate "search results" that contain the *frame classification* (Examiner's Italics). " The specific portion that the search keys are used for are for frame classification where the logical port identifier portion can be extracted.

11. Next, Applicant argues that the Mann reference is non-analogous art as it is concerned with efficiency of a destination server to classify packets received at a network interface from a large number of remote network nodes where the objective is to relieve a server of the burden of sorting through packets from the multitude of nodes.

12. Examiner argues that the Applicant's description is that of the function of a queue ID.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. Claims 1 – 12, 20 – 29, and 42 – 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buskirk (U.S. Patent Application 2002/0191543) in view of Mann (U.S. Patent 6957281).

15. With regards to claims 1 and 22, Buskirk teaches a data classifier and method of classifying data in a data classifier deployed in a network device with ports coupled to a heterogeneous communications network (3: [0033+] read multiple packet flow and multiple protocols) the method comprising the steps of: receiving a data packet at a port of the network device, the data packet including a first portion; (4: [0049] read parsing engine perform layer classification) receiving the first portion of the data packet at the data classifier; extracting a plurality of tags and a logical port identifier (ID) from the first portion (4:[0049] parsing engine performs layer classification and tagging); determining data attributes (flow ID) representative of a network service on the heterogeneous communications network associated with the data packet (6:[0060] flow is identified upon arrival of frame header); and priority ID (6:[0061] read priority fields in header to classify flows).

16. However Buskirk is silent with regards to combining the flow ID and the priority ID to create a queue ID.

17. Mann teaches a method for determining a priority ID (6: [0030-0035] read priority level) and flow ID (6: [0030-0035] read session identification) level of inbound packets transmitted over a heterogeneous network and combining the flow ID and the priority ID to create a queue ID (6: [0014-0023] and Figure 3 for queue ID read packet bundle descriptor).

18. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the flow/priority ID packet classification teachings of Buskirk with the queue ID as taught by Mann.

19. The modified teachings would be advantageous in optimally transferring packet groups across the network based on flow and priority ID with a scheduler such as that shown, for example, in Mann Figure

2. In this manner, packets can be aggregated into flows and transmitted on a priority basis per network Service Level Agreements (SLA).

20. With regards to claims 2, 3, 23 and 24, Buskirk teaches the step where the type of a received packet is checked to match with the received port; and if the packet type and port do not match generating an error tag. (4: [0048] read pre-processor performs packet verification and discarding, packet protocol identification).

21. In reference to claims 4 and 25, Buskirk teaches of storing the tags in a tag memory. (4: [0048] read results of pre-processor are stored in memory)

22. In reference to claims 5 and 26, Buskirk teaches of determining a flow ID by reading tags from tag memory (6: [0060] and Figure 6 read memory Figures Element (FE) 622 identify flow/fetch parameters FE 620).

23. In reference to claims 8 and 29, Buskirk teaches of the network service to include, generically, a local area network service – which can either be public or private. (3: [0037]).

24. With regards to claim 9, Buskirk teaches that the flow Id is determined using tags and logical ports. (6: [0060] read classifier module classifies flow of incoming stream into separate logical flows and (6: [0061] flows can be based on packet header, packet type, etc.).

25. In reference to claims 10 and 11, Buskirk teaches flow ID based on sender and receiver of packet. Though Buskirk teaches of classification based on the IP address, Buskirk also teaches that flow can be determined by monitoring any particular field of the packet header, e.g. MAC (6: [0061]) or input/output flow ID.

26. With reference to claim 12, Buskirk teaches (6: [0061]) teaches flow ID based on the packet header, e.g. MAC (6: [0061])

27. With regard to claims 20 and 21, Buskirk teaches (3: [0038]) of priority ID based on plurality of tags (e.g. bandwidth, jitter, latency, etc.).

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28. With regards to claims 42 and 43, Buskirk teaches that the data classifier can be fabricated on a single functional block of a single die. (4: [0044]).

29. With reference to claims 6 – 7, 27 – 28, and 44 – 45, Buskirk and Mann teach the limitations of Claim 1, and, further Buskirk teaches of a flow ID based on the packet header, e.g. MAC (6: [0061]).

Allowable Subject Matter

30. Claims 13 – 19 and 30 – 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

FINAL ACTION

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Baron whose telephone number is (571) 270-1748. The examiner can normally be reached on 7:30 AM to 5:00 PM E.S.T. Monday to Friday.

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34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
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